

中国横断山区竹亚科箭竹属新分类群^{*}

辉朝茂 杜 凡 杨宇明 薛纪如

(西南林学院, 昆明 650224)

摘 要 报道了中国西南部横断山区竹亚科箭竹属 6 个新种、4 个新变型, 它们是: 马歌箭竹 (*Fargesia aurita* Hsueh et Hui), 阔叶箭竹 (*F. macrophylla* Hsueh et Hui), 怒江箭竹 (*F. nujiangensis* Hsueh et Hui), 兰坪箭竹 (*F. nujiangensis* f. *lanpingensis* Hsueh et H. R. Zhang), 纹鞘箭竹 (*F. nujiangensis* f. *striata* Hsueh et Hui), 马兹箭竹 (*F. stricta* Hsueh et Hui), 粗枝箭竹 (*F. pachyclada* Hsueh et Hui), 灰秆箭竹 (*F. pallens* Hsueh et Hui), 福贡箭竹 (*F. contracta* f. *fugongensis* Hsueh et J. K. Duan), 高山箭竹 (*F. alpina* Hsueh et Hui)

关键词 中国横断山区; 竹亚科; 箭竹属; 新种

NEW SPECIES OF *FARGESIA* (BAMBUISOIDEAE) FROM THE HENGDUANSHAN MOUNTAIN AREA, CHINA

Hui Chao-mao Du Fan Yang Yu-ming Xue Ji-ru

(Southwest Forestry College, Kunming 650224)

Abstract Seven new species and four new forms from the Hengduanshan Mountain area are reported in this paper—*Fargesia aurita* Hsueh et Hui *F. macrophylla* Hsueh et Hui *F. nujiangensis* Hsueh et Hui *F. nujiangensis* f. *lanpingensis* Hsueh et H. R. Zhang *F. nujiangensis* f. *striata* Hsueh et J. K. Duan *F. stricta* Hsueh et Hui *F. pachyclada* Hsueh et Hui *F. pallens* Hsueh et Hui *F. contracta* f. *fugongensis* Hsueh et J. K. Duan *F. alpina* Hsueh et Hui.

Key words Hengduanshan Mountain area, China; Bambusoideae; *Fargesia*; New species

* 本文系云南省科委应用基础研究基金资助项目。
收稿日期: 1997-10-10

1. 马歌箭竹 (新拟) 马歌 (泸水傈僳语) 新种 图 1

Fargesia aurita Hsueh et Hui, sp. nov.

Species *F. lenuigni* Yi affinis, sed auriculis vaginarum manifestis vaginis supra pubescentis, laminis vaginarum erectis, auriculis foliorum conspicuis differt.

Rhizomata sympodialia, 5–6 cm longa; culmi caespitosi, 8–10 m alti, 2.5–3.5 cm dia.; internodia 35–40 cm longa, usque ad 50 cm longissima, fistulosa, glabra, infra nodos primo farinosa postea nigrescentes; nodi vaginarum elevati et culmorum planiores; rami relate crassi seape (5) 8–11 fasciculati. Vaginae culmorum celeriter deciduae, coriaceae vel pachypapyraceae, longe triangulatae, internodio paulo longiores, nervis longitudinalibus conspicuis, nervillis transversis non evidentis, marginebrunnei-ciliatae primo valde manifestae, oralibus truncatis medio rotundate-altis; auriculae vaginarum conspicuae, margine setis aliquot fimbriatis 2–3 mm longis; ligulae vaginarum 2–4 mm altae, margine involutae, orale setosae, dorsaliter tomentosae; laminae vaginarum longe lanceolatae erectae aegre reflexae, margine saepe involutae, basibus interaneis tomentosis. Folia in ramunculis 2–4(5); vaginae foliorum inferne dense setosae; auriculae foliorum conspicuae, setis aliquot 2–3 mm longis; ligulae foliorum 2 mm alti, truncatae; laminae lanceolatae, 15–20 cm longae, 1.5–2.5 cm latae, glabrae, nervis secundariis utinque 5–6 nervillis transvertis visibilibus. petioli 4–6 mm longi, glabri.

Yunnan Lushui, Pianma, Wuzhong Mont., 2650 m alt., 29, March 1992, Zi Shize Hui Chaomao 92026 (Typus in SWFC); same county, He Runyun, Hui Chaomao 92027.

地下茎合轴型, 秆柄粗壮, 长 5–6 cm 秆近丛生, 高 8–10 m, 直径 2.5–3.5 cm, 老秆向阳处可变黄, 节间中空, 长 35–40 cm, 最长 50 cm, 光滑, 幼时节下密被白粉, 老后成黑垢; 箨环隆起, 秆环较平; 分枝较粗状, 常 (5) 8–10 枚 秆箨早落, 箨鞘革质至厚纸质, 长三角状, 全包或超包节间, 背面被稀疏瘤基刺毛, 纵脉纹明显, 小横脉不发育, 边缘具棕色纤毛, 初时尤显著, 鞘口截平或中部弧形高耸; 箨耳明显, 其外侧边缘具数枚长 2–3 mm 流苏状隧毛; 箨舌高 2–4 mm, 常内向翻卷, 口部具隧毛, 外面被绒毛; 箨片长披针形, 直立 (稀外翻), 常内卷, 内面基部被绒毛, 基部两侧外延成波状箨耳。小枝具叶 2–4(5) 枚; 下部叶鞘常被密刺毛; 叶耳显著, 其上具数枚 2–3 mm 隧毛, 叶舌高 2 mm, 截平形; 叶柄长 4–6 mm, 无毛; 叶片披针形, 长 15–20 cm, 宽 1.5–2.5 cm, 无毛, 次脉 5–6 对, 小横脉清晰。

本种与泡竹 (*F. lenuigneae* Yi) 近似, 但前者箨耳明显, 鞘被面仅具稀疏刺毛; 箨片直立, 叶耳显著, 易于区别。

泸水, 片马吴中后山, 海拔 2650 m, 生于常绿阔叶林带上部 1992 年 3 月 29 日, 子世泽、辉朝茂等 92026 号 (Typus in SWFC); 同地, 和润云、辉朝茂等 92027 号。

秆作编织用, 亦是作箭的上等材料。

2. 阔叶箭竹 (新拟) 科 (福贡怒语) 新种 图 2

Fargesia macrophylla Hsueh et Hui, sp. nov.

Species *F. hsuhiana* Yi affinis, sed internodiis glabris, nodiis vaginarum glabris; interdum vaginis culmorum tantum dorso setis raris, margine ciliis densis; ligulis vaginarum

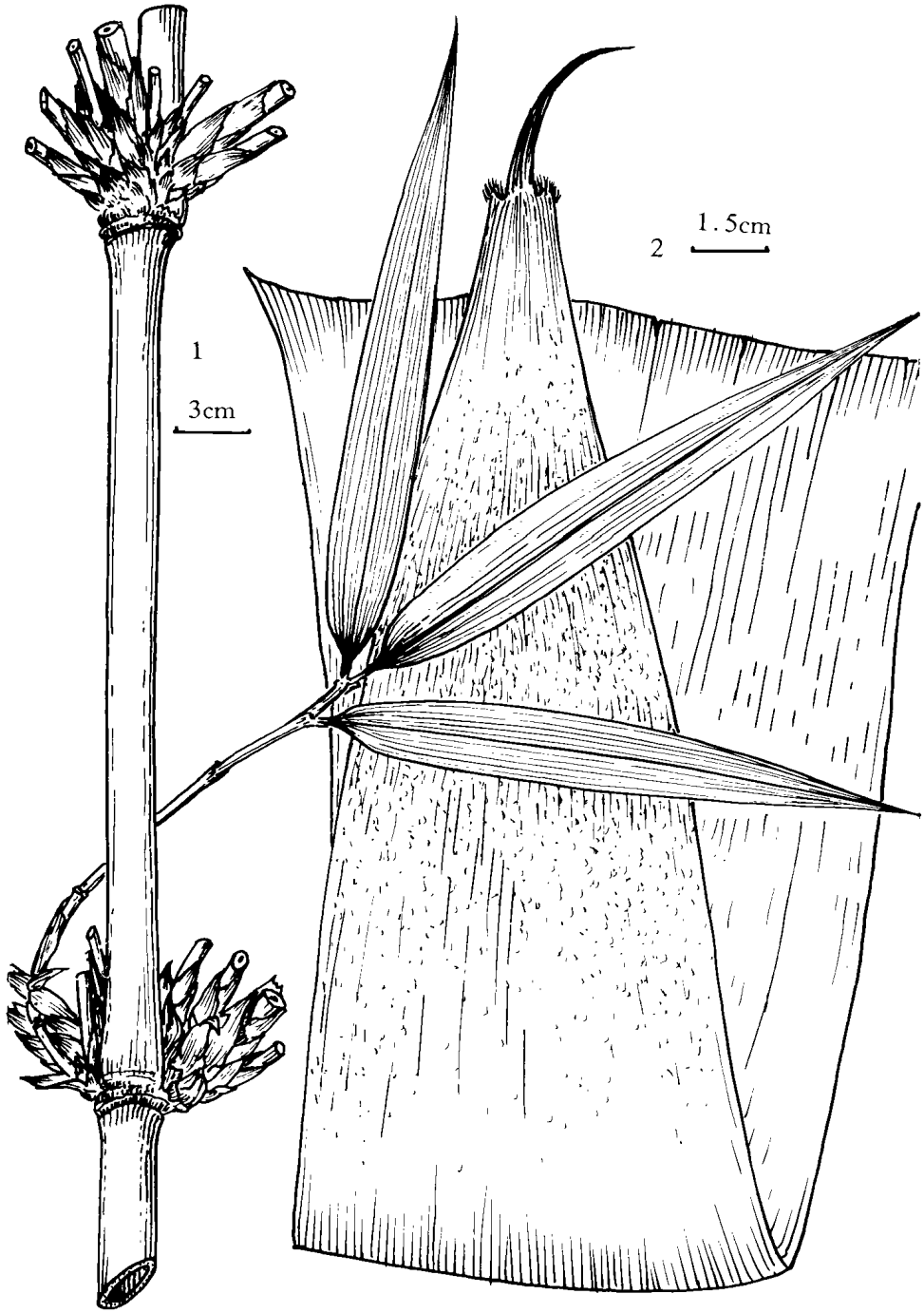


图 1 马歌箭竹

1. 竿及小枝；2. 竿箨（王红兵绘）

Fig. 1 *Fargesia aurita* Hsueh et Hui, sp. nov.

1. Pole and branchlet; 2. Sheath

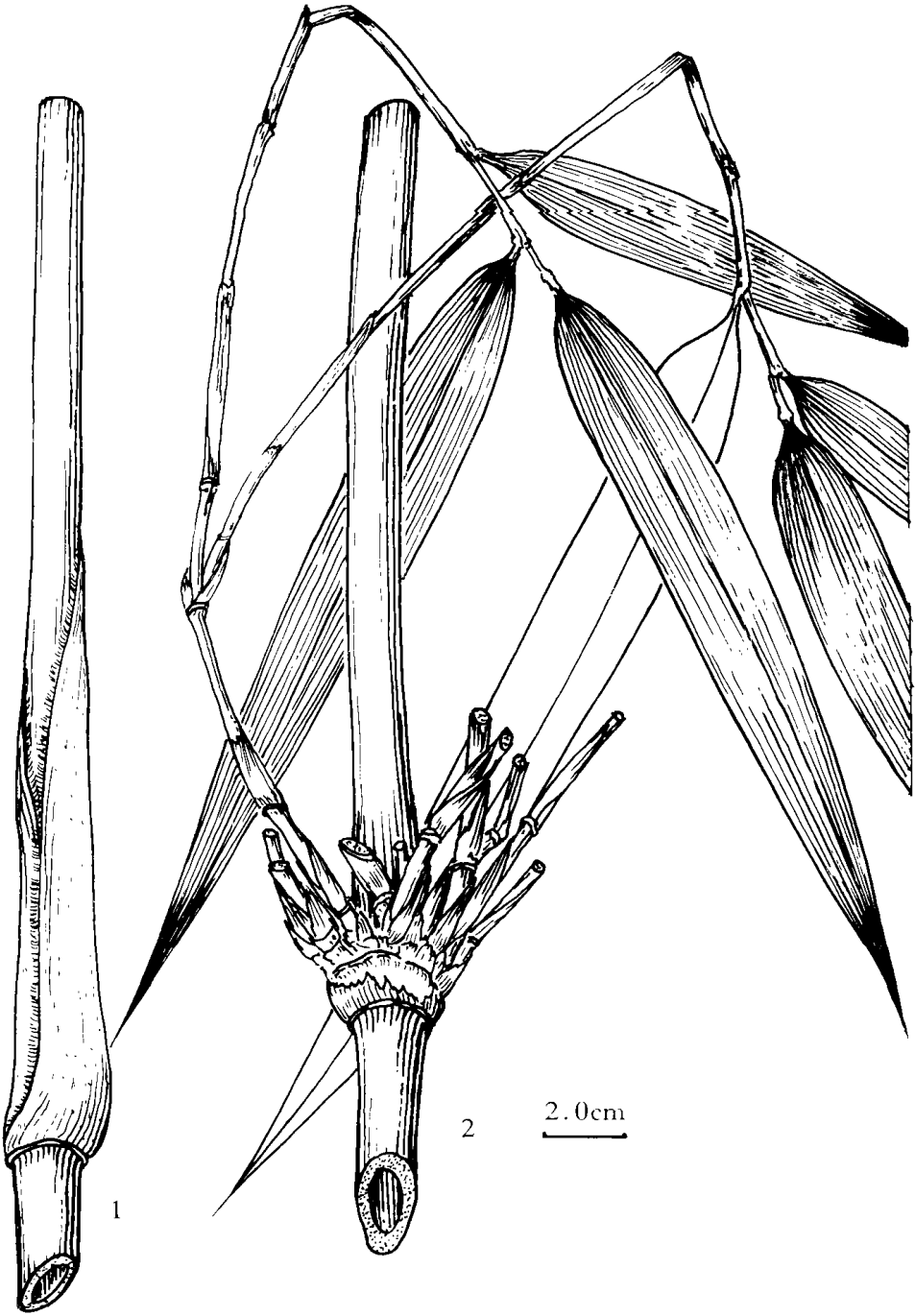


图 2 阔叶箭竹

1. 竿及秆箨; 2. 竿、分枝及枝叶 (王红兵绘)

Fig. 2 *Fargesia macrophylla* Hsueh et Hui, sp. nov.

1. Pole and sheath; 2. Pole, branch and branch leaves

culmorum 2– 5mm altis; oralibus vaginarum foliorum non setosis; foliis magnis, usque ad 15– 25cm longis, nervillis transversis conspicuis differt.

Culmi caespitosi, c. 2– 3 m. alti, 0. 5– 1. 0 cm dia.; internodia 28– 38 cm longa, juventute leviter farinosa, fistulosa glabra; nodi vaginarum suberosi elevati glabri, et culmorum elevatique; rami numerosissimi, dilute crassi. Vaginae culmorum persistentes coriaceae, internodio curtiores, interdum disperse setosae, margine dense ciliatae, nervis longitudinalibus solummodo in utroque latere conspicuis; auriculae vaginarum cum setis nullae; ligulae vaginarum truncatae, c. 2– 5mm altae; laminae vaginarum reflexae, basibus angustis quam oralibus vaginarum. Folia in ramunculis 3– 5; vaginae foliorum glabrae; auriculae foliorum cum setis nullae; ligulae foliorum circa 1 mm altae, rotundatae vel truncatae; laminae 15– 25 cm longae, 2– 4cm latae, in basibus canepilosae, nervis secundariis utique 5– 7, nervillis transvertis manifestis.

Yunnan Fugong, Zhizhuo, 1950 m alt., 7th, Apr. 1992, Apu Hui Chaomao 92046 (Typus in SWFC).

秆丛生状, 高约 2– 3m, 粗 0. 5– 1cm; 节间长 28– 38cm, 初时微被白粉, 光滑, 中空; 箨环木栓质隆起, 无毛; 秆环亦隆起成一脊状, 二者近等高, 并在分枝之节肿起。分枝多数, 略粗壮。箨鞘宿存, 革质, 短于节间, 有时被疏刺毛, 纵脉纹仅两侧明显, 边缘密被纤毛; 箨耳及隧毛缺失; 箨舌截平形, 高约 2– 5mm; 箨片外翻, 基部较鞘口为窄, 小枝具叶 3– 5枚, 叶鞘无毛, 无叶耳, 鞘口隧毛缺失, 叶舌圆弧形或截平形, 高约 1mm, 叶柄长 3– 10mm; 叶片长 15– 25cm, 宽 2– 4cm, 次脉 5– 7对, 基部具灰色柔毛, 小横脉清晰。

本种近似薛氏箭竹 (*F. hsuehiana* Yi), 但节间光滑无毛, 箨环无毛; 箨鞘背面仅有时疏被刺毛, 边缘密被纤毛; 叶舌高达 2– 5mm; 叶鞘口隧毛缺失; 叶片大型, 长达 15– 25cm, 小横脉明显等, 易于区别。

福贡: 知子罗, 海拔 1950m, 1992年 4月 7日, 阿普·辉朝茂等, 92046号 (Typus in SWFC)

本种竹壁坚硬, 狩猎时用于制造陷阱内的竹签最好。

3. 怒江箭竹 (新拟) 马诗 (福贡)、马谢 (泸水) 新种 图 3

***Fargesia nujiangensis* Hsueh et Hui, sp. nov.**

Species *F. hsuehiana* Yi affinis, sed culmis farctis, ramis 5 in quoque, internodis interdum dense farinosis vel ceraceis, nodis glabris, vaginis culmorum solum parce et facile – caduce setulosis differt.

Rhizomata sympodialia; culmi disperse caespitosi, 3– 5 m alti, 1– 3 cm dia.; internodia 23– 30cm longa farcta, primo dense farinosa vel ceraces, porcis longitudinalibus manifestis, nodis glabris; nodi vaginarum suberosi elevati et culmorum planiores; rami 5 in quoque nodo, fere aequales in crasso. Vaginae culmorum celeriter vel sero deciduae, coriaceae, breviores quam internodia, setis parvis et caducis, marginibus superne ciliatis, nervis longitudinalibus conspicuis, nervillis transversis non evidentis, oralibus truncatis vel interdum retusis; auriculae vaginarum et setae orales nullae; ligulae vaginarum 2– 5 mm altae, laminae vaginarum reflexae, basibus angustioribus quam oralibus vaginarum.

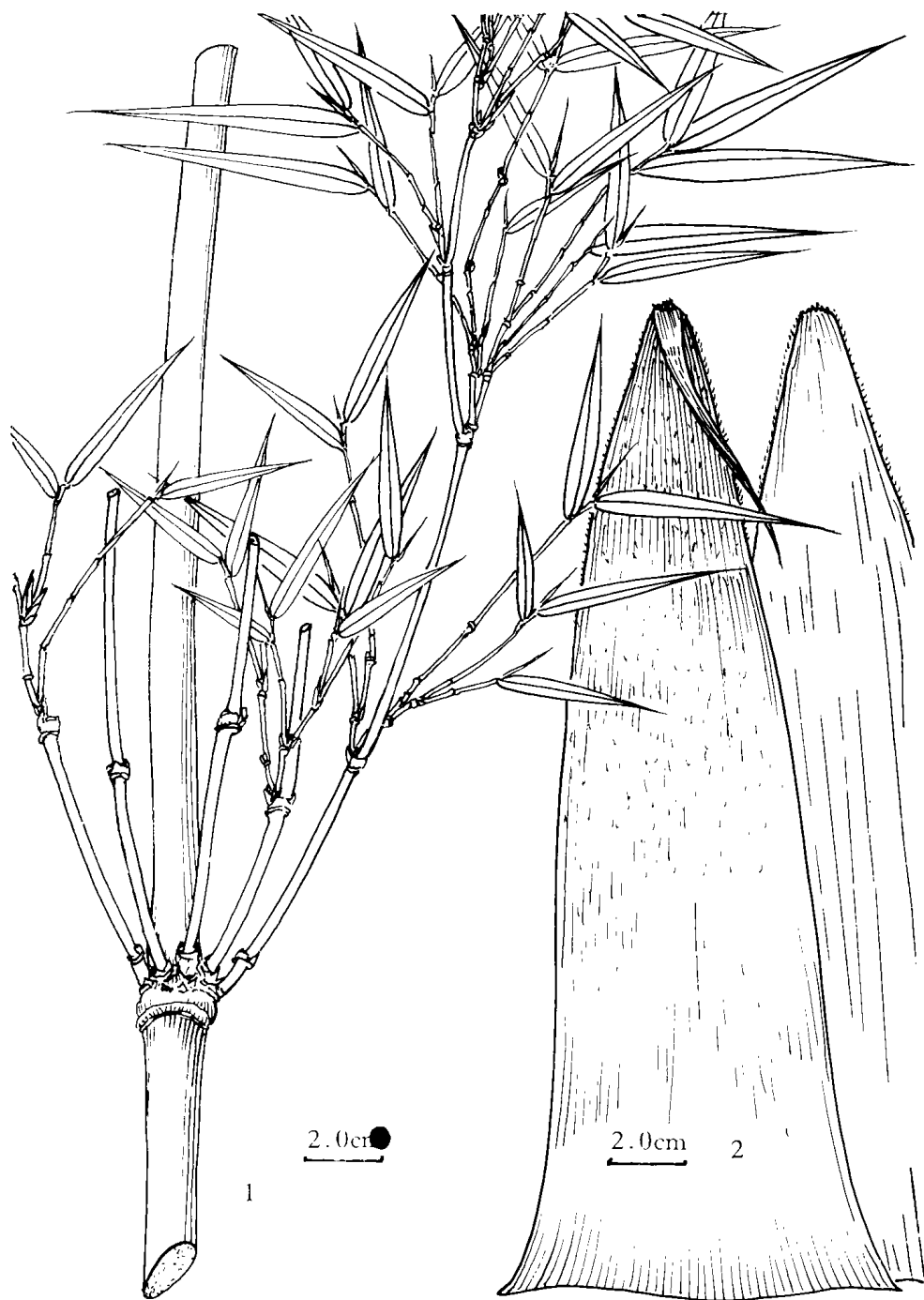


图 3 怒江箭竹

1. 竿及枝叶; 2. 秆箨 (王红兵绘)

Fig. 3 *Fargesia nujiangensis* Hsueh et Hui, sp. nov.

1. Pole and branch leaves; 2. sheath

Folia in ramunculis 2– 3; vaginae foliorum glabrae; auriculae foliorum cum setis nullae; ligulae foliorum c. 1 mm altae; laminae lanceolatae, 5– 10 cm longae, 5– 6 mm latae, glabrae, nervis secundariis utrinque 2– 3, nervillis transversis obscuris.

Yunnan Fugong, Zhiziluo, Biluo Mount., 2800– 3100 m alt. 7th, Apr. 1992, Zhang Haoran, Hui Chaomao 92041 (Typus, in SWFC); Lushui, West part of Gaoligong shan Mount., above 2400 m alt., He Xueyou, Hui Chaomao 88113; same county, East part of Gaoligong mount., 2600 m alt., Jin Guanyin, Hui Chaomao 89031; same county, Fenghuangshan Forest Farm, 2780 m alt., He Fuqin, Hui Chaomao 89031.

地下茎合轴型;秆疏丛状生长,高 3– 5m,粗 1– 3cm,节间长 23– 30cm,幼时密被白粉或灰色蜡质,节部无毛,纵棱纹明显,实心;箨环木质隆起,秆环平;分枝 3枚,近等粗,枝箨早落;秆箨早落至迟落,箨鞘革质,小横脉不发育,鞘口平截或有时下凹,箨耳及隧毛缺失;箨舌高 2– 5mm;箨片外翻,基部较鞘口窄,小枝具叶 2– 3枚,叶鞘无毛;叶耳及隧毛缺失;叶舌高约 1mm;叶片披针形,长 5– 10cm,宽 5– 6mm,无毛,次脉 2– 3对,小横脉清晰

本种近似薛氏箭竹 (*F. hsuehiana* Yi),但秆实心,分枝 3枚;节间有时密被白粉或蜡质,节部无毛;箨鞘仅被稀疏易落的小刺毛,易于区别

云南:福贡县知子罗碧罗雪山,生长于海拔 2800– 3200m 的铁杉林下。1992年 4月 7日,张浩然、辉朝茂等 92041号 (Typus in SWFC);泸水县高黎贡山西坡,海拔 2400m 以上,1988年 1月 1日,何学友、辉朝茂 88113号;同地高黎贡山东坡海拔 2600米,1989年 3月 13日,金光银、辉朝茂 89031号;同地凤凰山林场,海拔 2780m,和福清、辉朝茂等 89021号。

秆实心并坚硬,用于盖房子;叶细小具观赏价值。

4. 兰坪箭竹 (新拟) 节盖枝 (兰坪白语) 新变型 图 4

Fargesia nujiangensis* f. *lanpingensis Hsueh et H. R. Zhang. f. nov.

A typo recedit internodiis saepe fistulosis, muris c. 1/3 dia. crassisa.

Yunnan; Lanping, Xinshengqiao Forest Farm, 2900– 3000 m alt., 13th, March 1992, Zhang Haorang, Hui Chaomao 92001 (Typus in SWFC).

与原变种区别在于节间常空心,秆壁厚度与空心直径相等。

兰坪:新生桥林场,海拔 2900– 3000m,上层树种有铁杉、华山松,伴生各种杜鹃。1992年 3月 13日,张浩然、辉朝茂等 92001号 (Typus in SWFC)。

5. 纹鞘箭竹 (新拟) 新变型 图 5

Fargesia nujiangensis* f. *striata Hsueh et Hui, f. nov.

A typo recedit vaginis culmorum dorsaliter striis flavis longitudinalibus, margine ciliis brunneis densis, ligulis vaginarum breviter ciliatis, laminis vaginarum erectis.

Yunnan Gongshan, Dandan, Haibai Mount., 2500– 2600 m alt., 23th, June, 1989, Wang Zhongzheng, Hui Chaomao 89046 (Typus in SWFC).

本种与原变种的区别在于箨鞘具浅黄色纵条纹,边缘被棕色纤毛,箨舌具短纤毛,箨片直立

贡山:丹当、海拜山,海拔 2500– 2600m 1989年 6月 23日,王忠正、辉朝茂 89046号 (Typus

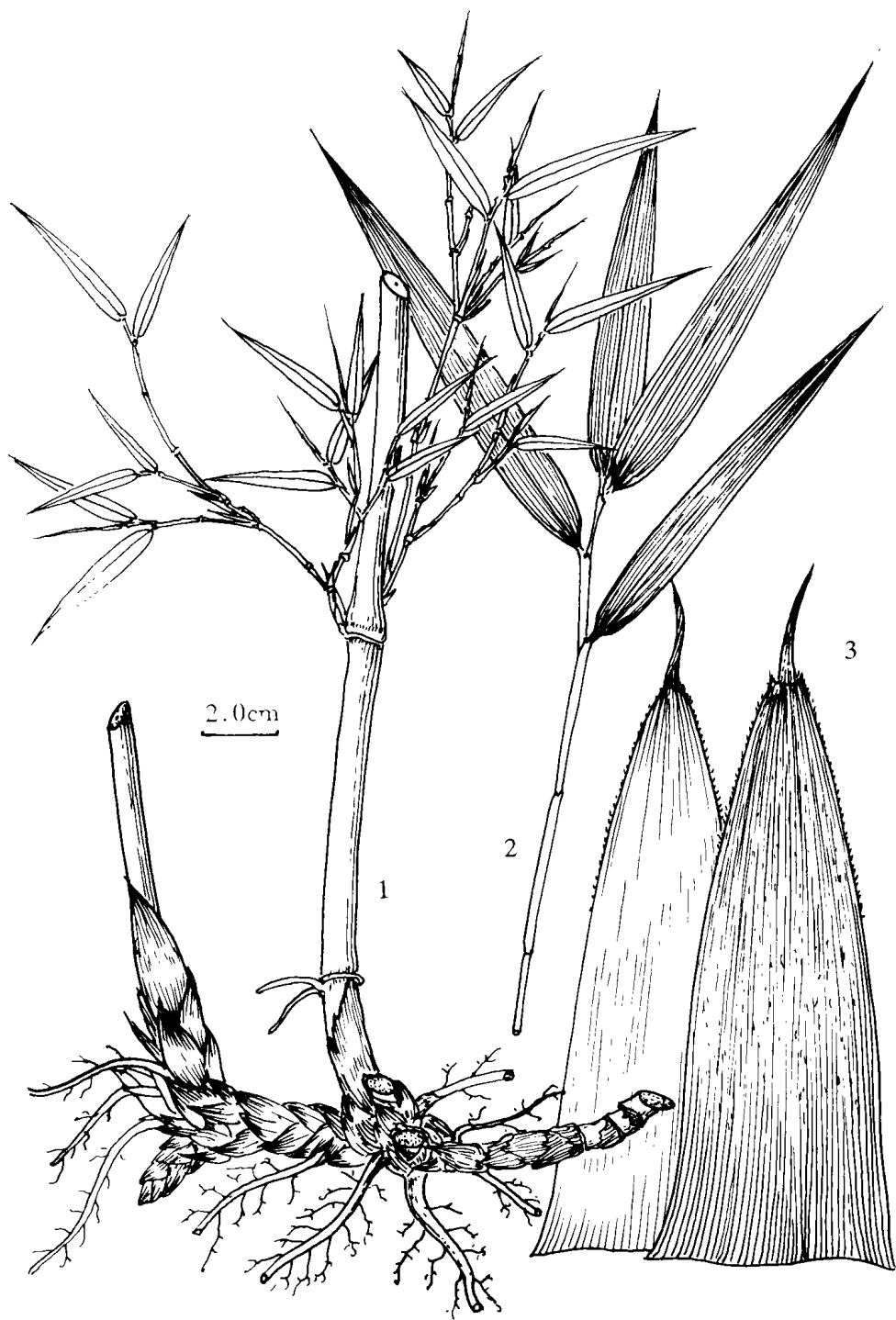


图 4 兰坪箭竹

1. 地下茎及竿、枝、叶；2. 枝叶；3. 竿箨 (王红兵绘)

Fig. 4 *Fargesia nuijiangensis* f. *lanpingensis* Hsueh et H. R. Zhang. f. nov.

1. Rhizome, pole, branch and Leaves; 2. Branch leaves; 3. Sheath

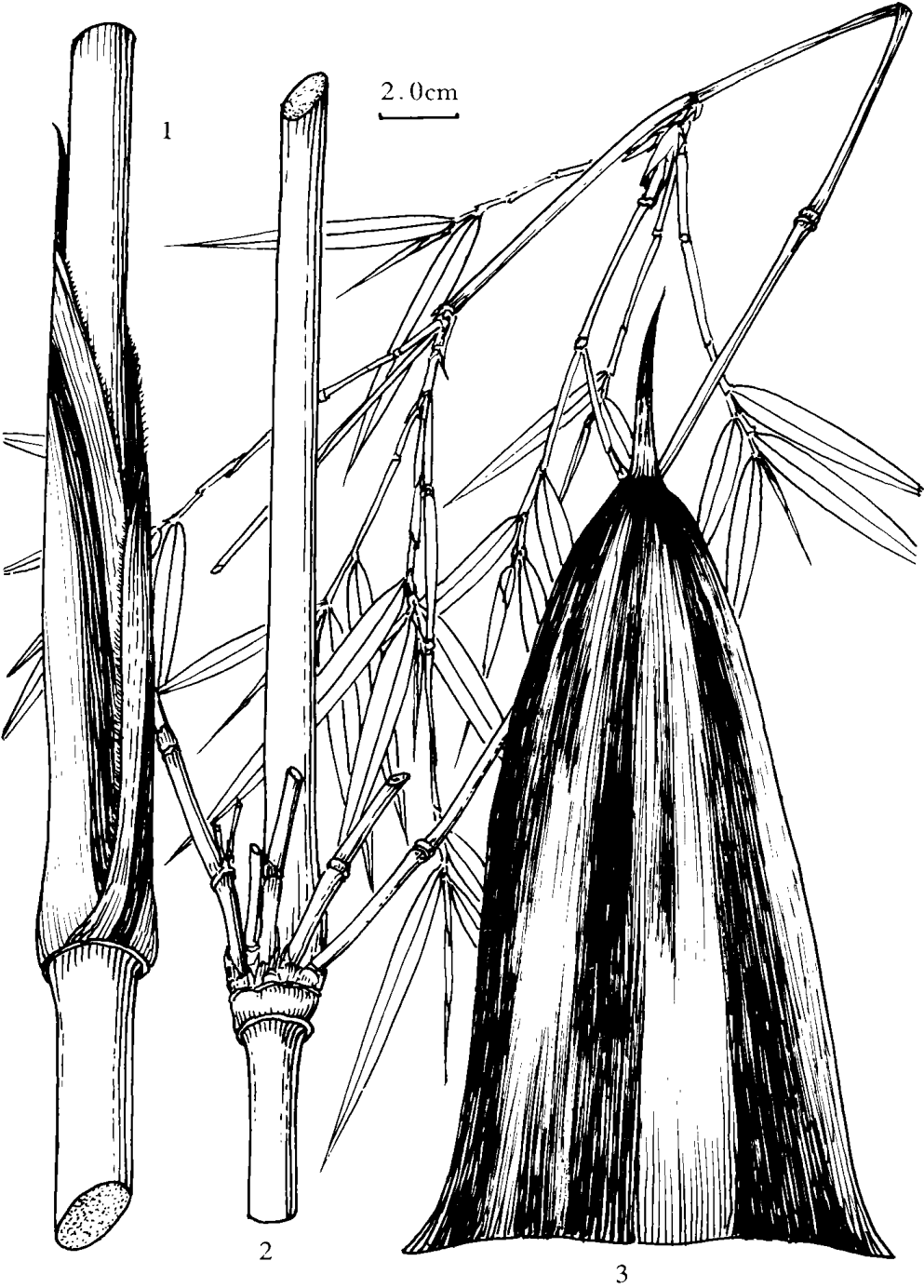


图 5 纹鞘箭竹

1. 竿; 2. 竿及枝叶; 3. 竿箨 (王红兵绘)

Fig. 5 *Fargesia nujiangensis* f. *striata* Hsueh et hui, f. nov.

1. Pole; 2. Pole and branch leaves; 3. Sheath

in SW FC)

6. 马兹箭竹 (新拟) 马兹比 (泸水傈僳语) 新种 图6

Fargesia stricta Hsueh et Hui sp. nov.

Species *F. collari* Yi affinis, sed nodiis culmorum valde prominentibus, ramis in quoque nodo 3–5, vaginis culmorum setosis ad basem densissimis differt.

Rhizomata sympodialia; culmi caespitiosi, 5–8 m alti, 2–3 cm dia.; internodia 30–37 cm longa, fistulosa vel apice subfarcta, glabra, porcis longitudinalibus obscuris; nodi vaginarum elevati, basibus vaginatis persistentibus; nodi culmorum valde prominentes; internodia non farinosa; rami in quoque nodo 3–5(8). Vaginae culmorum celeriter deciduae coriaceae oblongae, ad apicem in collis brevi contractae, setis brunneis longitudinaliter ordinatae ad basem densissimis, nervis longitudinalibus conspicuis, margine non ciliatae; auriculae vaginarum cum setis nullae; ligulae vaginarum 1–3 mm altae, orale breviter ciliatae; laminae vaginarum reflexae lineri lanceolatae, angustioribus quam orales vaginarum. Folia in ramunculis 3–4(5); auriculae foliorum cum setis nullae; ligulae foliorum c. 1 mm altae; laminae lanceolatae, 5–10 cm longae, 5–8 mm latae, nervis secundariis utinque 2–3, nervillis transversis non evidentis.

Yunnan Lushui, Pianma, Wuzhong Mount., 2200–2300 m alt., 29th, Marth 1992, Zhang Haoran, Hui Chaomao 92030 (Typus in SW FC); Same county, 15th, Dec. 1988, Yang Changchun, Hui Chaomao 88109.

地下茎合轴型; 秆丛生, 高 5–5cm, 粗 2–3cm, 节间长 30–37cm, 中空, 或在稍部近实心, 光滑, 纵纹不显, 箨环隆起, 具鞘基残留物; 秆环隆起成脊状; 节内无白粉; 分枝 3–5(8) 枚。秆箨早落; 箨鞘革质, 矩圆形, 先端收缩成短颈状, 被棕褐色刺毛, 基部尤密呈毯状, 纵脉纹显著, 边缘无纤毛; 箨耳缺失, 鞘口两肩无隧毛; 箨舌高约 1–3mm, 口部具短纤毛; 箨片线状披针形, 外翻, 较鞘口为窄。小枝具叶 3–4(5) 枚, 鞘口无隧毛, 叶耳缺失; 叶舌高约 1mm; 叶片披针形, 长 5–10cm, 宽 5–8mm, 次脉 2–3 对, 小横脉不清晰。

本种近似颈鞘箭竹 (*F. collaris* Yi), 但前者秆环隆起成一脊, 分枝 3–5 枚; 箨鞘被刺毛, 基部尤密, 呈毯状, 易于区别。

泸水: 县片马吴中后山, 海拔 2200–2300m, 生于常阔叶林下。199 年 3 月 29 日, 张浩然、辉朝茂 92030 号 (Typus in SW FC); 同地, 198 年 12 月 1 日, 杨长春、辉朝茂 8810 号。

秆刚直而光滑, 叶细柔而翠绿, 观赏价值较高。

7. 粗枝箭竹 (新拟) 新种 图7

Fargesia pachyclada Hsueh et Hui, sp. nov.

Species *F. acuticontracti* Yi affinis, sed culmis in apicibus non acutis; internodiis dense velutinis grieis, vetule glaucis, porcis longitudinalibus manifestis; nodis culmorum elevatis; ligulis vaginarum 3–4mm altis differt.

Rhizomata sympodialia; culmi quasi dispersi, 2–5m alti, 1–2cm dia.; internodia 25–40cm longa, primo dense velutina griea, infra nodos densissima, velute glauca, farctiet

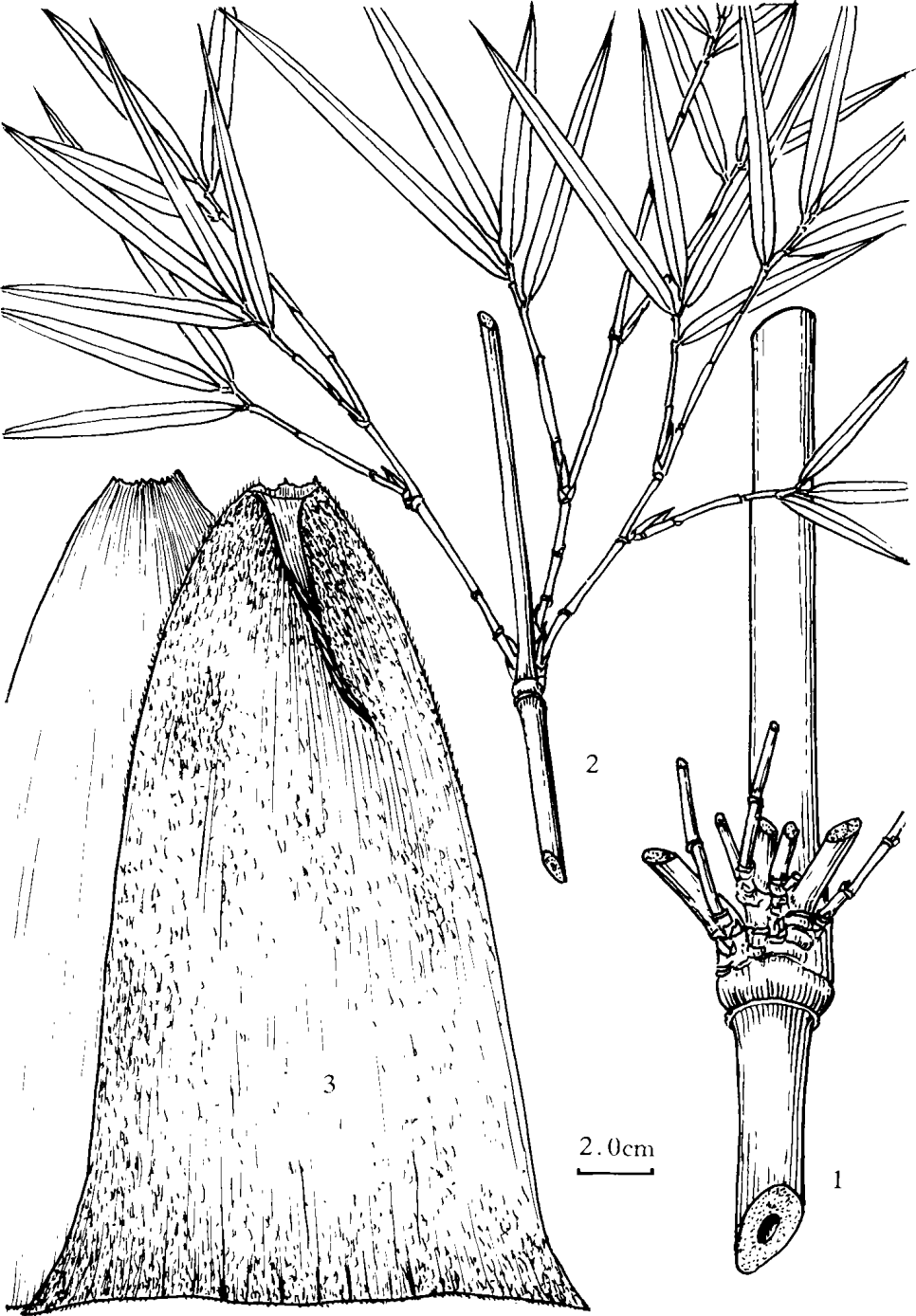


图 6 马兹箭竹

1. 竿及分枝; 2. 枝叶; 3. 竿箨 (王红兵绘)

Fig. 6 *Fargesia stricta* Hsueh et hui, sp. nov.

1. Pole and branch; 2. Branch leaves; 3. Sheath

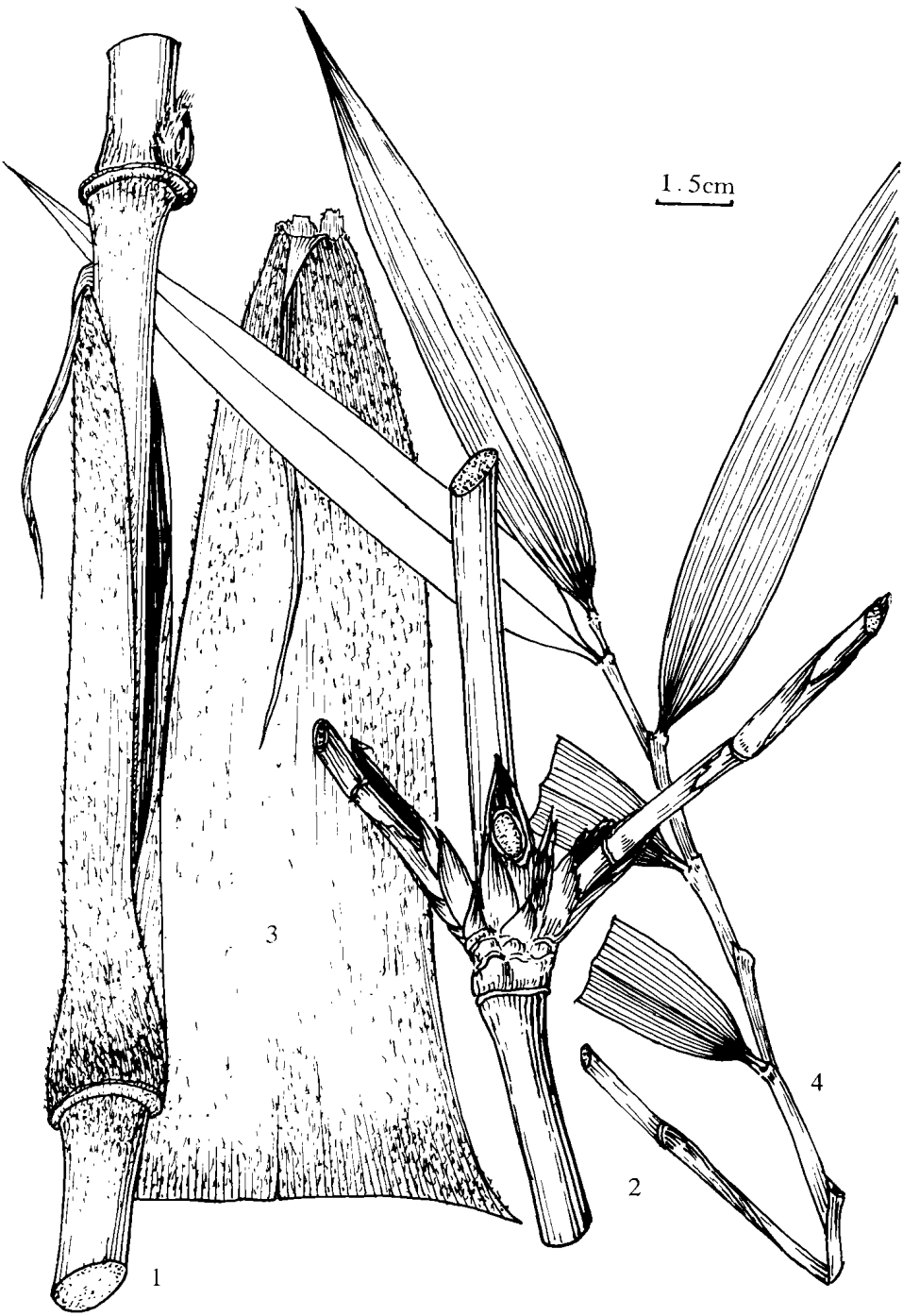


图 7 粗枝箭竹

1. 竿 (示竿芽及被毛); 2. 竿及分枝; 3. 竿箨; 4. 枝叶 (王红兵绘)

Fig. 7 *Fargesia pachydada* Hsueh et hui, sp. nov.

1. Pole (Show pole bud and pilosity); 2. Pole and branch; 3. Sheath; 4. Branch leaves

dura, porcis longitudinalibus manifestis, nodis distentis; nodi vaginarum subrosiet culmo-elevati. Gemma ovata adnata, margine superne dense ciliata. Rami in quoque nodo 3, crassiores, vaginis ramorum persistentibus. Vaginae culmorum tarde deciduae vel persistentes, coriaceae, internodiis subaequilongae, dense brunnei-setosae, nervis longitudinalibus conspicuis, nervillis transversis non evidentis, margine bruneoli-ciliatae, oralibus, vaginarum saepe obliquis atque humeris leviter altis; auriculae vaginarum cum setis nullae; ligulae vaginarum manifestae, usque ad 3–4 mm altae, orale parce ciliatae; laminae vaginarum reflexae, lineri-lanceolatae, basibus angustioribus quam oralibus vaginarum. Folia in ramunculis 3–6; vaginae foliorum cum margines interdum ciliatae; auriculae foliorum nullae fortuito setosae; ligulae foliorum truncatae. 1–2 mm alti; laminae 15–24 cm longae, 2–3.3 cm latae, dorsis basum interdum velutinis, nervis secundariis utinque 5–6, nervillis transversis manifestis; petioli 6–8 mm longi.

Yunnant Lushui, Fenghuangshan Forest Farm, 2800m alt., 3th, Apr. 1989, He Fuqin, Hui Chaomao 89030 (Typus in SW FC).

地下茎合轴型;秆近散生,高 2–5m,粗 1–2cm,节间长 25–40cm,幼时密被灰色绒毛,节下尤密,老时被白蜡质,实心而坚硬,纵棱纹明显,节膨长,箨环木栓质,秆环隆起,芽卵圆形,贴生,上部边缘密生纤毛;分枝较高,每节三枚,较粗壮,枝箨宿存,秆箨迟落或宿存,箨鞘革质,与节间近等长,密被棕褐色刺毛,纵脉纹明显,小横脉不发育,边缘具灰褐色纤毛;鞘口常偏斜,两肩略高,箨耳及隧毛缺失;箨舌发达,高可达 3–4mm,口部具稀疏纤毛;箨片外翻,线状披针形,基部较鞘口为窄。小枝具叶 3–6枚,叶鞘及边缘有时具毛,叶耳缺失,偶见隧毛;叶舌截平,高约 1–2mm,柄长 6–8mm,叶片长 15–24cm,宽 2–3.3cm,干后常皱折,基部背面,有时具绒毛,侧脉 5–6对,小横脉可见。

本种近似尖削箭竹 (*F. acuticontracta* Yi),但前者秆不成尖削状,节间密被灰色绒毛,老时被白蜡质,纵脉纹显著,秆隆起;箨舌高 3–4mm 易于区别。

泸水:凤凰山林场 10林班,海拔 2800m,伴生冷杉、木兰及杜鹃等,1989年 4月 3日,和福清、辉朝茂,89030号 (Typus in SW FC).

8. 灰秆箭竹 (新拟) 泗麻鲁 (怒语)、谷菊 (傈僳语) 新种 图 8

Fargesia pallens Hsueh et Hui, sp. nov.

Differt ob ceteris speciebus generis internodiis 40–60 longis usque ad 85 longissimis; internodiis et vaginis culmorum primo farinosis vel glaucis.

Rhizomata sympodialis; culmi caespitosi, 5–8 m alti, 2.5–3 cm dia.; internodia 40–60 cm longa, usque ad 85 umlongissima, farinosa, fistulosa; nodi vaginarum suberosi valde elevati, basibus vaginatis persistentibus deorsum cereis; nodiculmorum leviter prominentes; intranodia 0.9–1.5 longae, interdum canetomentosae. Gemma ellipta adnata, margine superne breviter ciliata; rami in quoque nodo 10–15, relate crassi. Vaginae culmorum tarde deciduae, crassi-coriaceae, breviores quam internodia, dorso parce setosae fuscae et farinosae, in medio nervillis longitudinalibus non evidentis, in marginem apicum ciliis ceciduis, oralibus feretruncatis vel leviter retusis; auriculae vaginarum cum

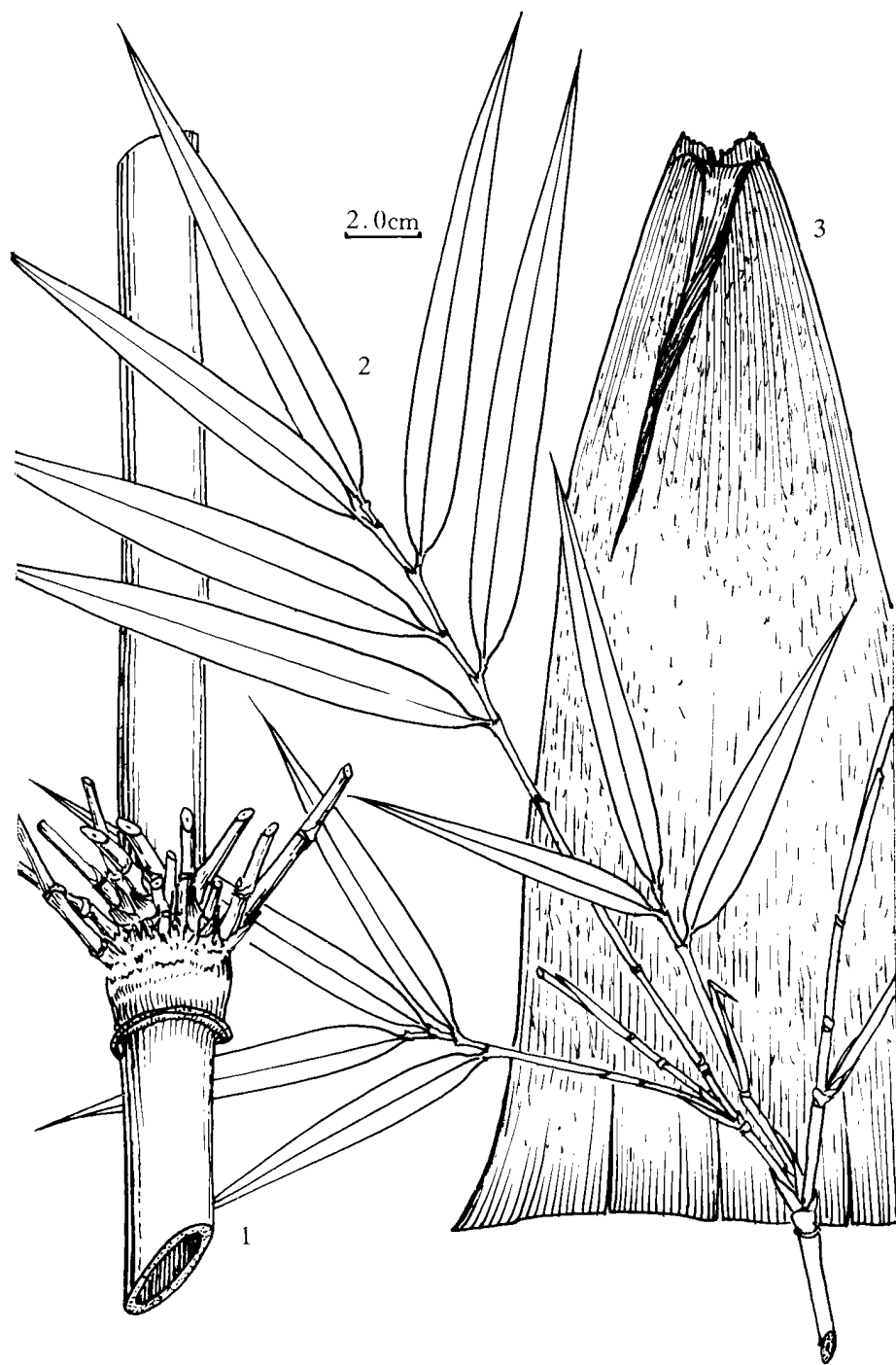


图 8 灰竿箭竹

1. 竿及分枝; 2. 小枝; 3. 竿箨 (王红兵绘)

Fig. 8 *Fargesia pallens* Hsueh et hui, sp. nov.

1. Pole and branch; 2. Branchlet; 3. Sheath

setis nullae; ligulae vaginarum manifestae, usque ad 5– 6 mm altae, farinosae, latitudinibus fere iis edem ac oralibus vaginarum; laminae vaginarum longe lanceolatae, reflexae, angustioribus quam orales vaginarum. Folia in ramunculis 3– 5; vaginae foliorum glabrae; auriculae foliorum cum setis nullae; ligulae foliorum c. 0. 5 mm altae; laminae 10– 14 cm longae, 10– 44 mm latae, glabrae, nervis secundariis utinque 3– 4, nervillis transversis dilute evidentis.

Yunnan Lushui, Gutang River to busroad, 2000 m alt., 4th, March 1989, Jin Guangying, Hui Chaomao 89026 (Typus in SW FC).

地下茎合轴型,秆丛生,高 5– 8m,粗 2. 5– 3cm,节间长 40– 60cm,最长 85cm,表面被白粉,中空;箨环木栓质高隆起,具鞘基参留物,其下被蜡质,秆环微隆起,节内宽 0. 9– 1. 5cm,有时被灰色绒毛;秆芽椭圆形,贴生,上部边缘被短纤毛;分枝 10– 15枚,较粗壮。秆箨迟落;箨鞘厚革质,短于节间,背面疏生褐色刺毛并被白粉,中部纵纹不明显,边缘上部具脱落纤毛;鞘口近平截或微向下凹,箨耳及两肩隧毛缺失;箨舌发达与鞘口近等宽,高可达 5– 6mm,被白粉,箨片长披针形,外翻,较鞘口窄。小枝具叶 3– 5枚,叶鞘无毛,叶耳及隧毛缺失,叶舌高约 0. 5mm;叶片长 10– 14cm,宽 10– 14mm,两面无毛,侧脉 3– 4对,小横脉较明显。

本种节间长 40– 60cm,最长达 85cm;新秆节间及箨鞘被白粉或蜡质,区别于属内各种。

泸水:古潭河至公路山坡,海拔 2000m,高山栲伴生,偶见。1989年 3月 14日,金光银、辉朝茂 89026号 (Typus in SW FC).

9. 福贡箭竹 (新拟) 马诗 (福贡傈僳语) 新变型 图 9

Fargesia contracta f. **fugonensis** Hsueh et J. K. Duan, f. nov.

A typo recedit maculis brunneis inaequalibus in vaginis culmorum, foliis deciduis.

Yunnan Fugong, Zhuminglin, Gaoligong shan Mount., 2800– 3000 m alt., 4th, Apr. 1992, Duan Jankun, Hui Chaomao 92036 (Typus in SW FC).

与原变种的区别在于箨鞘具大小不等的褐色斑块;叶脱落性

福贡:珠明林,高黎贡山,海拔 2800– 3000m 1992年 4月 4日,段剑坤、辉朝茂等 92036号 (typus in SW FC).

10. 高山箭竹 (新拟) 马诗 (贡山傈僳语) 新种 图 10

Fargesia alpina Hsueh et Hui, sp. nov.

Species *F. frigidi* Yi affinis, sed culmis farctis, vaginis culmorum dorsaliter glabris, auriculis vaginarum medio altioribus, laminis vaginarum reflexis, foliis in ramunculis 2– 3 differt.

Rhizomata sympodialia; culmi sparsim caespitosi, 2– 3(4)m alti, 1– 1. 5 cm diam.; internodia 20– 27 cm longa, primo farinosa, postea nigrescentes, glabra, farcta, poris longitudinalibus obscuris; nodi vaginarum prominentes lignosi et culmorum plani; rami numerosi fere horizontales. Vaginae culmorum celeriter deciduae, coriaceae, oblongae, ultime breviores quam internodii, dorsaliter glabri, nervis longitudinalibus conspicuis,

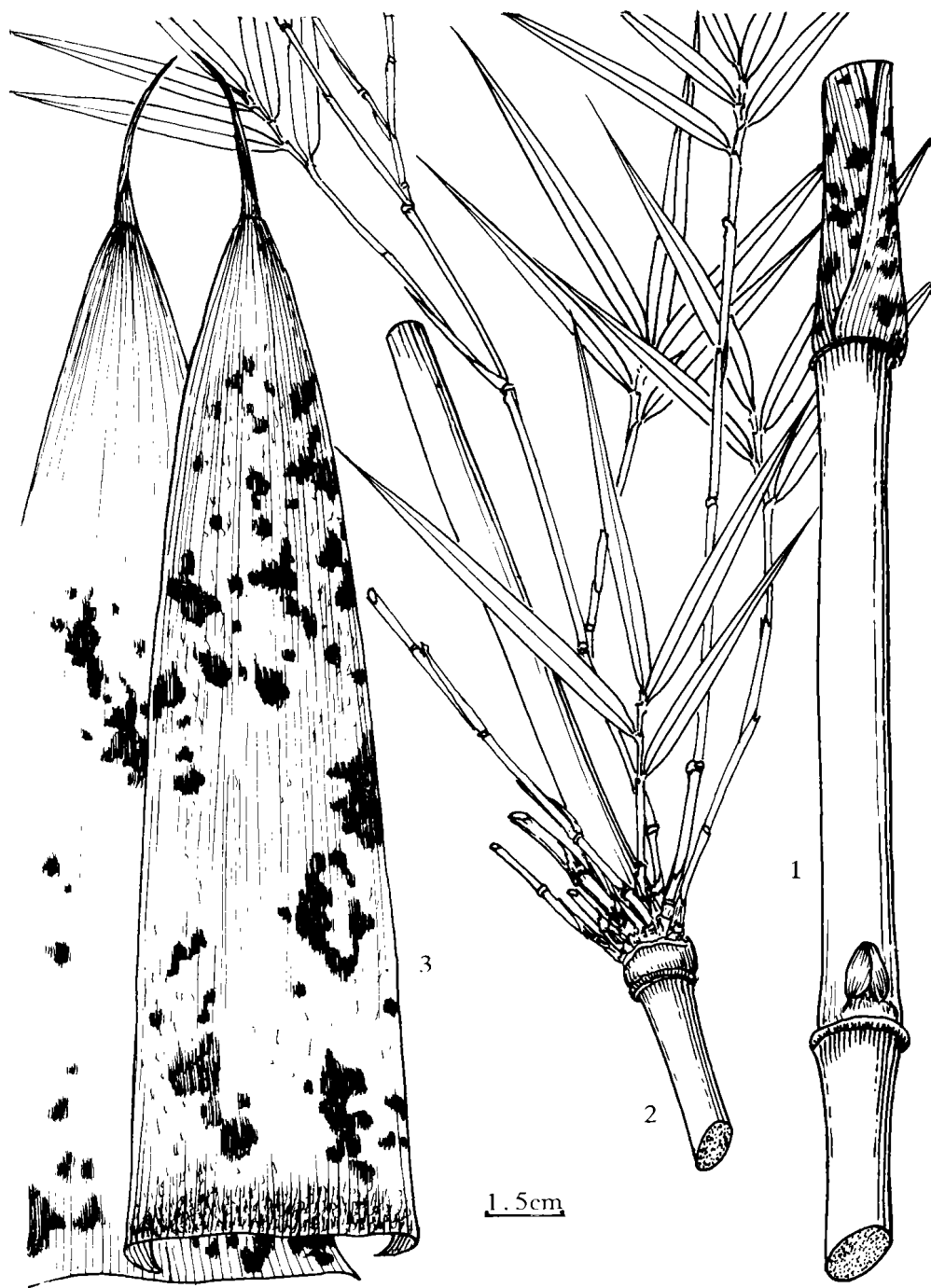


图9 福贡箭竹

1. 竿 (示笋芽); 2. 枝叶; 3. 笋箨 (王红兵绘)

Fig. 9 *Fargesia contracta* f. *fugongensis* Hsueh et J. k. Duan, f. nov.

1. Pole (Show pole bud); 2. Branch leaves; 3. Sheath



图10 高山箭竹

1. 地下茎及竿; 2. 竿及分枝; 3. 枝叶; 4. 竿箨 (王红兵绘)

Fig. 10 *Fargesia alpina* Hsueh et hui, sp. nov.

1. Rhizome and pole; 2. Pole and branch; 3. Branch leaves; 4. Sheath

nervillis transversis obscuris, unquam margine superne berriciliatae, apice rotundatae vel obliquae; auriculae vaginarum nullae; ligulae vaginarum 1– 2 mm altae, medio altiores; laminae vaginarum reflexae, basioralibus vaginarum subaequilatae. Folia in ramunculis 2 – 3; auriculae foliorum cum setis oralum nullae; ligulae foliorum truncatae; laminae lanceolatae glabrae, 3– 5 cm longae, 4– 5 mm latae, nervis secundariis utinque 2(3), nervillis transvertis obscuris.

Yunnan Gongshan, Dandan Haibai Mount., 2700– 2900 m alt., 23th, June 1989, Hui Chaomao, Wang Zhongzheng 89044(Typus in SWFC).

地下茎合轴型;秆疏丛状,高 2– 3(4)m,粗 1– 1.5cm,节间长 20– 27cm,幼时被白粉,老后变黑垢,无毛,纵细线棱纹不明显,实心;箨环隆起成脊,木质;箨环平;分枝多数,近平展,秆箨早落,矩圆状,远短于节间;箨鞘革质,背面无毛,纵纹明显,小横脉不发育,先端圆形或歪斜,上部边缘有时具短纤毛,箨耳缺失;箨舌约 1– 2mm,中部高耸,箨片直立,基部与鞘口近等宽,小枝具叶 2– 3枚,叶耳缺失;鞘口两肩无隧毛,叶舌截平形,口部无毛;叶片披针形,无毛,长 3– 5cm,宽 4– 5mm,次脉 2(3)对,小横脉不明显。

本种近似凋叶箭竹(*F. frigidis* Yi),但前者秆实心;箨鞘背面无毛;箨舌中部高耸;箨片外翻;小枝叶具 2– 3枚,可以区别。

云南:贡山,丹当,海拜山,成片生长,海拔 2700– 2900m, 1989年 6月 23日,辉朝茂、王忠正, 89044号(Typus in SWFC)

参 考 文 献

1. 耿伯介等. 中国植物志(第九卷,第一分册)(竹亚科). 北京: 科学出版社, 1996
2. 辉朝茂. 天然黄竹群落的群体结构及动态变化. 竹子研究汇刊, 1987
3. 辉朝茂. 薛纪如. 中国竹亚科梨藤竹属的研究. 植物分类学报, 1992, 30(2): 163– 168
4. 辉朝茂. 杨宇明. 杜凡. 竹类培育与利用. 北京: 中国林业出版社, 1996
5. 薛纪如. 杨宇明. 辉朝茂等. 云南竹类资源及其开发利用. 昆明: 云南科技出版社, 1955